

REMARKS/ARGUMENTS

This Amendment is being filed in response to the Final Office Action dated April 27, 2010. Reconsideration and allowance of the application in view of the amendments made above and the remarks to follow are respectfully requested.

Claims 1, 3-7, 9 and 11 are pending in the Application.

In the Final Office Action, claims 1, 3-7, 9 and 11 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. This rejection is respectfully traversed. The amended drawings and the specification are rejected as containing new matter. Specifically, the objection is directed to an indication of "the functional layer" in the previously submitted drawings.

This rejection under 35 U.S.C. §112, first paragraph is respectfully traversed. However, in the interest of advancing consideration and allowance of the pending application, the Applicants have once again elected to amend the application including drawings, a substitute specification and provide the following explanation. The Figures and the specification identify the active layer by numeral 11. The oxidic layer 12 is described as not being electrically conductive. As described in the present application at page 15, lines 17-22, apertures 14 are provided in the layer 12 for placement of metal. The metal being used for conductivity between the switching elements of the active layer 11 and the base layer 13 as described, for example, in the present application at page 12, line 17 to page 13, line 16. The specification and the Figures are modified to include reference numerals 40A, 40B, ... to identify the switching elements in the Figures.

The specification and the Figures are further modified to include reference numeral

44 to identify a display pixel electrode in the Figures. The originally filed specification and claims define the display pixel electrode as being in the base layer 13. Similarly, a capacitor described in the present application at page 6, lines 5-11 and recited in claim 5, is identified by the numeral 46 with its electrodes being identified at the conductive layers 11 and 13 on opposite sides of the insulating layer 12.

Amended drawings and a substitute specification reflecting the above and the removal of the reference numeral 15 from the specification and the term "functional layer" from the claims, are submitted herewith. No new matter is added. It is respectfully pointed out that the Applicants have again made a bona fide attempt to address the concerns raised in the Final Office Action. Accordingly, Applicants respectfully request approval of the amended specification and withdrawal of this rejection.

In the Final Office Action, the drawings are objected to under 37 CFR 1.83(a). In response, as stated above, a replacement drawing sheet is submitted including amended FIGs. 4-6. All references to numeral 15 are removed. Accordingly, Applicants respectfully request approval of the enclosed replacement drawings and withdrawal of the drawing objection.

In the Final Office Action, claims 1 and 9 are rejected under 35 U.S.C. §102(e) over U.S. Patent No. 6,798,679 to Matsumoto ("Matsumoto"). Claims 1, 3-7, 9 and 11 are rejected under 35 U.S.C. §103(a) over U.S. Patent No. 6,724,794 to Dudoff ("Dudoff") in view of U.S. Patent No. 4,729,061 to Brown ("Brown"). Claims 1 and 3-5 are rejected under 35 U.S.C. §102(b) over U.S. Patent Publication No. 2002/0050599 to Lee ("Lee"). Claims 1, 3-7 and 9 are rejected under 35 U.S.C. §102(b) over U.S. Patent No. 6,750,924

to Murade ("Murade"), and under 35 U.S.C. §103(a) over Murade in view of Lee. Claim 11 is rejected under 35 U.S.C. §102(b) over Murade and Lee, and further in view of WIPO document No. 02/073572 to E. Ink Corp. ("E. Ink Corp."). The claim rejections are respectfully traversed. It is respectfully submitted that the claims are allowable over Matsumoto, Dudoff and Brown, Lee, Murade, and E Ink Corp., for at least the following reasons.

MATSUMOTO

As the Final Office Action points out, Matsumoto in FIG. 3 illustrates a module substrate 2 having bare chips 1 molded into a mold resin 8 and a good function chip 3 sealed in a mold. Matsumoto in FIG. 3 also shows common electrical wires 20, mounting islands 10 and bonding wires (see also, Matsumoto in FIG. 32 items 104 and 105). It is respectfully submitted that Matsumoto does not specify how common electrical wires 20 are formed. To connect the active and functional layers Matsumoto requires

- (a) the bare chips 1 to connect to the bonding wires,
- (b) the bonding wires to connect to the mounting islands,
- (c) the mounting islands to connect to a second set of the bonding wires, and finally
- (d) the second set of the bonding wires to connect to the good function chip 3.

It is respectfully submitted that this scheme of Matsumoto fails to teach, disclose, or suggest a simple connection where "the at least one aperture extends from the base layer to the active layer and is filled with conductive material" as recited in claim 1. Thus, because the aperture extends from the base layer to the active layer in the present device,

the connection is achieved without requiring the common electrical wires, mounting islands, and bonding wires of Matsumoto. As substantially recited in claim 1 of the present device, the apertures themselves connect the base layer and the active layer. As clearly seen from the Figure presented on page 11 of the Final Office Action, there is no contact between the apertures 20 of Matsumoto and at least its active layer 1.

DUDOFF AND BROWN

With regard to Dudoff and Brown, it is respectfully submitted that the Final Office Action fails to identify exactly what sections of these references teach recitations of claim 1. A close examination of these references did not reveal what exactly would have motivated these skilled in the art to combine them. Even when combined, there is nothing in Brown that makes it obvious "to replace the direct metal bonding from the active to the functional layers of Dudoff". Furthermore, as the discussion above regarding claim 1 and Matsumoto shows, not all connections made through an insulating layer are the same. It is respectfully submitted that Dudoff and Brown fail to teach, disclose, or suggest (illustrative emphasis provided) "the at least one aperture extends from the base layer to the active layer and is filled with conductive material" as in claim 1.

LEE

In its paragraph [0030], Lee describes forming a pixel electrode 171 by deposition of a transparent conductive metal material on the passivation layer 165. This, does not rise to

a level of teaching, describing or suggesting "the at least one aperture extends from the base layer to the active layer and is filled with conductive material" as recited in claim 1.

MURADE

With regard to Murade, contrary to claim 1, the contact hole 52 of Murade is unfilled and, as discussed above, Lee does not remedy that deficiency.

FIGs. 7A and 7B of Murade on which the Final Office Action relies for rejecting claim 1, shows "passing through the insulating film 32, a first insulating interlayer 41, and the second insulating interlayer 42." It is respectfully submitted that Murade teaches away from active and functional layers 11 and 3 being disposed on opposing first and second sides of a single substrate layer 12 of insulating material as set out in claim 1.

It is respectfully submitted that the device of claim 1 is not anticipated or made obvious by the teachings of Matsumoto, Dudoff, Brown, Lee and Murade.

Based on the foregoing, the Applicants respectfully submit that independent claim 1 is patentable and notice to this effect is earnestly solicited.

E. INK CORP

E. Ink Corp. is not brought in to reject the independent claim and does not remedy the drawbacks of Lee and Murade.

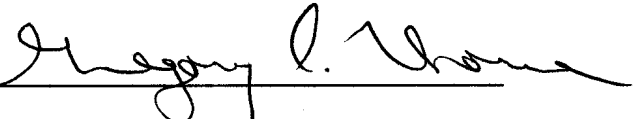
Claims 3-7, 9, and 11 respectively depend from claim 1 and accordingly are allowable for at least this reason as well as for the separately patentable elements

contained in each of the claims. Accordingly, separate consideration of each of the dependent claims is respectfully requested.

In addition, Applicants deny any statement, position, or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Applicants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

Applicants have made a diligent and sincere effort to place this application in condition for immediate allowance and notice to this effect is earnestly solicited.

Respectfully submitted,

By 

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Enclosures: Replacement drawings sheet including FIGs. 4, 5, and 6, substitute specification, marked-up version provided in Appendix A and a clean version provided in Appendix B.

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